HOPKINS-1

WHAT IS CLAIMED IS:

1 1. A method for time-stamping a message to a mobile

8

- 2 recipient, the method comprising the steps of:
- 3 receiving a message at a message center, the
- 4 message intended for receipt by a given recipient;
- 5 detecting a location of the given recipient;
- determining a time zone associated with a detected
- 7 location of the recipient; and
- 8 creating a time-stamp for said message using said
- 9 determined time zone.
- 1 2. The method of claim 1 comprising the further step
- 2 of transmitting said message with said time-stamp from
- 3 said message center to the recipient.
- 1 3. A method for time stamping a message to a mobile
- 2 station, the method comprising the steps of:
- 3 receiving a message for the mobile station at a
- 4 message center;
- 5 associating a first time with said message, said
- 6 first time related to the time of receipt of the message
- 7 by the message center;
- 8 determining if the mobile station is registered;
- 9 and
- if the mobile station is registered,
- detecting a location of the mobile station;
- determining a time zone associated with a
- 13 detected location of the mobile station; and
- creating a time-stamp that is associated with
- 15 said message using said first time and said determined
- 16 time zone.
 - 1 4. The method of claim 3 wherein if it is determined
 - 2 the mobile station is not registered, storing the
- 3 received message and the first time until such time as
- 4 the mobile station registers, and then

determining a location of the mobile station,
determining a time zone of the mobile station and;

7 creating a time-stamp that is associated with said

8 message using said first time and said determined time

9 zone.

6

7

8

1 5. In a wireless communication system, a method for 2 time stamping a message to a mobile station, the method 3 comprising the steps of:

4 receiving a message for a mobile station at a 5 message center at a first time;

interrogating a home location register (HLR) of said mobile station to determine if the mobile station is registered in the wireless communication system;

if said mobile station is registered, receiving from the HLR information identifying a mobile switching center through which the mobile station is registered;

determining a time off set between the message

center and the identified mobile switching center; and creating a time-stamp to be associated with said

creating a time-stamp to be associated with said
message using said first time and said time off-set.

- 1 6. The method of claim 5 wherein if said mobile
- 2 station is determined to not be registered then, storing
- 3 the message and first time wherein the first time
- 4 constitutes an initial approximation of a time stamp,
- 5 said initial approximation subject to change upon
- 6 receipt of mobile station location information upon
- 7 subsequent registration by said mobile station.
- 1 7. A method for sending a time-stamped message to a
- 2 mobile recipient, the method comprising the steps of:
- receiving a message at a message center in a first time zone;
- determining a second time zone in which the mobile recipient is located;
- 7 creating a time-stamp based on said second time

- 8 zone; and
- 9 sending said time-stamp and said message to the
- 10 mobile recipient.
 - 1 8. The method of claim 7 wherein said first and second
 - 2 time zones are different.
- 1 9. The method of claim 7 wherein said step of
- 2 determining said second time zone comprises the step of:
- determining a network node with which the mobile
- 4 recipient is registered.
- 1 10. The method of claim 9 wherein said network switch
- 2 comprises a switch providing wireless communication
- 3 capabilities.
- 1 11. A system for time stamping a message to a mobile
- 2 recipient comprising:
- a home location register (HLR) that holds
- 4 information about where the mobile recipient is
- 5 registered;
- a message center that receives a message for the
- 7 mobile recipient and queries the HLR for an indication
- 8 of a location of the mobile recipient; and
- 9 a time zone database identifying a time zone for
- 10 the indicated location of the mobile location;
- 11 wherein said message center time stamps said
- 12 received message using time zone information identified
- 13 by said time zone database.
- 1 12. The system of claim 11 wherein said indicator
- 2 identifies a mobile switching center with which the
- 3 mobile station is registered.